

Mineral Industry Surveys

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NICKEL IN FEBRUARY 2006

Reported domestic nickel consumption in February, on a daily average basis, was 6% greater than the revised total for January, according to the U.S. Geological Survey. Daily average nickel consumption of cathodes, pellets, briquets, powders, and ferronickel for stainless steel production was 63.1 metric tons per day (t/d), 16% greater than 54.6 t/d (revised) for January and 9% greater than 58.2 t/d for December 2005. Consumption of >99.8% nickel metal to make superalloys (such as INCONEL 718 and WASPALOY) increased by 9% from January levels, on a daily average basis. Consumption of nickel to make corrosion-resistant, less stress-resistant nickel-base alloys (such as INCONEL 600 and Nickel 200) increased by 2% from January levels, on a daily average basis. Sales to plating

companies averaged 31.7 t/d, about 5% greater than January sales of 30.1 t/d.

On February 28, U.S. consumer stocks of cathode, pellets, briquets, and powders totaled 1,990 metric tons (t), up 8% from 1,850 t (revised) for January 31, but down 3% from 2,050 t reported for December 31, 2005. Stocks in London Metal Exchange (LME) warehouses totaled 34,728 t on February 28, 7% less than 37,152 t on January 31.

The United States imported 143,000 t of primary nickel in 2005, 5% greater than 136,000 t in 2004. Trade data for February will appear in a subsequent report.

Some of the percentages reported in the first paragraph are based on data concealed to avoid revealing individual company proprietary data.

TABLE 1
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE¹

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total	Total year to date
2005:					
February	5,030	464	44	5,540	11,200
March	5,090	567	44	5,700	16,900
April	5,410	430	50	5,890	22,800
May	5,010	520	41	5,570	28,400
June	5,440	541	44	6,020	34,400
July	4,590	378	38	5,010	39,400
August	5,060	437	42	5,540	45,000
September	5,190	658	44	5,900	50,800
October	5,230	708	44	5,980	56,800
November	5,220	585	57	5,860	62,700
December	4,750	619	52	5,420	68,100
January-December	61,100	6,450	544	68,100	XX
2006:					
January	5,420 ^r	542	55 ^r	6,010 ^r	6,010 ^r
February:					
Steel:					
Stainless and heat resisting	1,190	574	W	1,770	3,520
Alloy (excludes stainless)	293	--	--	293	634
Superalloys	1,150	--	W	1,150	2,360
Copper-nickel alloys	W	--	--	W	W
Electric, magnetic, and expansion alloys	14	--	--	14	28
Other nickel & nickel alloys	W	--	--	W	W
Cast iron	W	--	--	W	W
Electroplating (sales to platers)	877	--	--	877	1,820
Chemical and chemical uses	W	--	--	W	W
Other uses	1,590	--	54	1,640	3,400
Total reported	5,120 ²	574	54	5,740	11,800
Total all companies (calc) ³	XX	XX	XX	10,800	22,100
2006: January-February	10,500	1,120	111	11,800	XX
2005: January-February	10,100	1,010	89	11,200	XX

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Of consumption, 4,090 metric tons were consumed as cathodes and pellets, the remainder as briquets and powder.

³Figures represent calculated apparent consumption; based on the revised proportion of reported primary consumption (53.17%) to apparent primary consumption for 2003.

TABLE 2
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS, BY FORM AND USE^{1,2}

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total
2005:				
February	1,860	268	160	2,290
March	2,270	279	140	2,690
April	1,900	285	141	2,330
May	2,000	274	144	2,420
June	1,860	310	132	2,300
July	1,610	283	141	2,030
August	1,680	276	139	2,100
September	1,680	273	153	2,110
October	1,660	279	147	2,090
November	1,720	307	147	2,170
December	2,050	300	146	2,500
2006:				
January	1,850 ^r	302 ^r	153 ^r	2,300
February:				
Steel (stainless, heat resisting and alloy)	666	341	(3)	1,010
Nonferrous alloys ⁴	1,170	W	(3)	1,170
Foundry (cast irons)	(3)	W	W	(3)
Chemical (catalysts, ceramics, plating salt, etc.) and unspecified uses	150	W	177	327
Total	1,990	341	177	2,510

^rRevised. W Withheld to avoid disclosing company proprietary data.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks held by companies that consume nickel in more than one end use category are credited to the major category. Stocks are subject to revisions owing to inventory adjustments.

³Included in the "Chemical and unspecified uses" category.

⁴Includes superalloys, nickel-copper and copper-nickel alloys, permanent magnet alloys, and other nickel alloys.

TABLE 3
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE¹

(Metric tons, nickel content)

Period	Consumption			Stocks		
	Ferrous scrap ²	Nonferrous scrap ³	Total scrap	Ferrous scrap ²	Nonferrous scrap ³	Total scrap
2005:						
February	4,680	736	5,420	2,440	82	2,530
March	4,510	799	5,310	2,490	96	2,590
April	4,930	762	5,700	2,510	95	2,610
May	3,790	776	4,560	2,620	93	2,710
June	4,520	698	5,220	2,810	115	2,930
July	4,120	658	4,780	2,740	102	2,840
August	4,360	748	5,110	2,630	113	2,740
September	4,490	709	5,200	2,800	99	2,900
October	5,000	638	5,640	3,010	110	3,120
November	5,520	611	6,130	2,630	98	2,730
December	4,530	593	5,130	2,470	89	2,560
January-December	56,200	8,380	64,600	XX	XX	XX
2006:						
January	3,710	708	4,420	2,600	100	2,700
February	4,130	654	4,790	2,850	92	2,950

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

³Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of origin	Cathodes pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date ⁴	Wrought nickel
2004:										
January-December	107,000	9,220	13,900	1,210	7,850	11,000	4,440	155,000	XX	796
2005:										
January	9,040	756	1,940	114	585	780	279	13,500	13,500	40
February	10,200	596	2,040	122	524	853	360	14,700	28,200	95
March	7,600	1,010	1,950	488	629	750	334	12,800	40,900	81
April	11,100	813	1,820	325	515	1,070	316	16,000	56,900	65
May	9,140	866	1,260	257	595	831	407	13,400	70,300	75
June	9,010	335	2,470	--	583	776	308	13,500	83,800	119
July	9,050	543	1,700	--	633	624	177	12,700	96,500	89
August	10,500	772	1,370	--	447	402	295	13,800	110,000	116
September	9,410	500	1,890	--	645	443	294	13,200	123,000	94
October	8,410	794	728	17	719	505	286	11,500	135,000	63
November	9,690	714	1,240	107	689	581	277	13,300	148,000	94
December	7,310	423	877	110	608	731	291	10,400	159,000	128
January-December	110,000	8,120	19,300	1,540	7,170	8,340	3,620 ⁵	159,000	XX	1,060
2006:										
January:										
Australia	906	--	--	--	7	--	--	913	913	--
Brazil	376	--	--	--	--	--	--	376	376	--
Canada	5,190	447	--	80	116	497	12	6,340	6,340	--
Colombia	--	--	180	--	--	--	--	180	180	--
Dominican Republic	--	--	634	--	--	2	--	636	636	--
Finland	857	7	--	--	--	--	80	944	944	--
France	62	--	--	--	69	--	17	148	148	15
Germany	--	8	--	--	70	--	42	120	120	20
Japan	--	3	--	--	6	--	30	39	39	3
Mexico	--	--	--	--	22	209	4	235	235	--
New Caledonia	--	--	50	--	--	--	--	50	50	--
Norway	1,730	--	--	--	--	--	--	1,730	1,730	--
Russia	2,580	260	--	--	--	--	--	2,840	2,840	--
South Africa	--	139	--	--	--	--	(5)	139	139	--
Sweden	--	1	--	--	--	--	--	1	1	--
United Kingdom	12	93	--	--	240	--	5	350	350	27
Zimbabwe	78	--	--	--	--	--	--	78	78	--
Other	38	13	--	--	121	9	117	298	298	11
Total	11,800	971	864	80	651	717	307	15,400	15,400	76

⁵Revised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴May include revisions for prior months.

⁵Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of destination	Cathodes pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date	Wrought nickel
2004:										
January-December	972	2,130	68	201	12,400	35,900	4,630	56,300	XX	1,110
2005:										
January	37	211	1	161	1,230	2,400	228	4,270	4,270	63
February	31	165	3	3	877	3,960	316	5,360	9,620	57
March	91	160	12	7	1,070	3,990	289	5,630	15,200	131
April	82	190	6	4	902	5,710	344	7,230	22,500	104
May	84	373	11	2	777	3,230	452	4,930	27,400	129
June	168	176	9	2	523	2,950	460	4,280	31,700	214
July	173	113	4	3	814	3,020	335	4,460	36,200	105
August	91	84	--	1	1,270	3,350	506	5,300	41,500	156
September	147	85	4	5	1,150	3,950	315	5,650	47,100	105
October	134	148	1	8	1,040	3,450	281	5,070	52,200	94
November	70	116	(4)	5	1,000	3,640	271	5,100	57,300	79
December	80	87	21	33	1,080	4,200	430	5,940	63,200	99
January-December	1,190	1,910	72	234 ^r	11,700	43,800	4,230	63,200	XX	1,340
2006:										
January:										
Australia	--	--	--	--	7	--	--	7	7	(4)
Belgium	--	--	--	2	--	10	76	88	88	--
Canada	20	7	4	--	1,030	94	82	1,230	1,230	5
China	--	1	3	8	--	1,070	18	1,100	1,100	10
Finland	--	--	--	--	--	974	--	974	974	--
Germany	(4)	18	--	--	23	2	8	51	51	3
India	--	(4)	--	--	--	159	--	159	159	(4)
Italy	--	(4)	--	--	--	991	--	991	991	1
Japan	4	6	--	1	50	60	11	132	132	3
Korea, Republic of	(4)	3	--	--	--	230	16	249	249	11
Mexico	78	2	--	--	--	--	8	88	88	1
Netherlands	--	(4)	--	--	--	145	--	145	145	(4)
South Africa	--	--	--	1	--	--	2	3	3	--
Sweden	--	--	--	--	32	--	(4)	32	32	--
Taiwan	--	27	--	--	--	285	36	348	348	--
United Kingdom	--	8	--	--	68	1	4	81	81	1
Other	3	35	8	--	--	71	126	243	243	123
Total	105	107	15	12	1,210	4,100	387	5,930	5,930	158

^rRevised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of origin	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
January-December	3,000	3,120	5,740	2,590	322	3,060	2,080	19,900	XX
2005:									
January	273	220	600	234	35	67	304	1,730	1,730
February	329	255	422	257	49	175	202	1,690	3,420
March	361	294	629	316	16	103	173	1,890	5,320
April	241	338	486	274	33	143	176	1,690	7,010
May	310	355	662	324	43	148	152	1,990	9,000
June	437	422	558	260	20	159	237	2,090	11,100
July	325	342	603	275	29	64	194	1,830	12,900
August	447	360	462	242	20	172	293	2,000	14,900
September	644	314	500	241	34	176	156	2,070	17,000
October	491	333	480	241	20	170	466	2,200	19,200
November	551	214	629	262	16	286	198	2,160	21,300
December	429	295	552	221	35	183	243	1,960	23,300
January-December	4,840	3,740	6,580	3,150	350	1,850	2,790	23,300	XX
2006:									
January:									
Australia	182	--	(2)	--	--	--	(2)	182	182
Belgium	37	--	6	--	--	3	4	50	50
Canada	39	--	3	50	--	10	(2)	102	102
China	--	--	(2)	(2)	5	1	76	82	82
France	--	3	152	9	--	7	2	173	173
Germany	147	151	104	276	(2)	36	3	717	717
Italy	--	113	22	--	--	--	12	147	147
Japan	(2)	--	1	--	--	120	(2)	121	121
Mexico	--	--	--	--	--	--	2	2	2
Netherlands	--	--	--	--	--	--	8	8	8
South Africa	39	--	--	--	--	--	--	39	39
Sweden	--	49	170	5	--	28	--	252	252
United Kingdom	66	43	7	1	(2)	(2)	10	127	127
Other	47	20	13	13	1	--	20	114	114
Total	557	379	478	354	6	205	137	2,120	2,120

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of destination	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
January-December	7,510	10,400	1,850	4,470	244	1,800	3,440	29,700	XX
2005:									
January	994	1,180	84	312	11	226	186	2,990	2,990
February	910	1,050	104	392	10	163	278	2,910	5,900
March	1,200	1,350	178	388	7	200	404	3,730	9,630
April	499	1,350	135	340	8	190	281	2,800	12,400
May	1,200	1,170	158	378	3	191	268	3,370	15,800
June	726	1,220	108	275	5	216	272	2,820	18,600
July	1,130	1,060	170	409	5	211	293	3,280	21,900
August	1,010	1,310	114	301	9	285	360	3,390	25,300
September	565	1,250	92	398	26	237	286	2,850	28,100
October	731	1,100	125	393	27	417	401	3,190	31,300
November	628	1,430	104	335	5	419	288	3,210	34,500
December	762	1,510	65	282	3	243	267	3,130	37,700
January-December	10,400	15,000	1,440	4,200	119 ^r	3,000	3,580	37,700	XX
2006:									
January:									
Australia	--	(2)	(2)	(2)	--	(2)	3	3	3
Belgium	--	290	(2)	17	--	1	(2)	308	308
Canada	19	66	17	45	2	30	24	203	203
China	--	129	7	48	--	23	16	223	223
France	103	201	(2)	10	(2)	1	5	320	320
Germany	11	46	2	10	(2)	7	1	77	77
India	(2)	1	--	(2)	--	2	(2)	3	3
Ireland	--	--	1	1	--	--	(2)	2	2
Israel	1	109	--	4	(2)	36	1	151	151
Italy	38	3	1	11	(2)	(2)	4	57	57
Japan	161	69	(2)	28	1	107	1	367	367
Korea, Republic of	1	41	(2)	13	--	157	1	213	213
Mexico	(2)	63	19	22	11	101	122	338	338
Netherlands	--	(2)	(2)	1	--	3	6	10	10
Singapore	2	6	(2)	1	(2)	2	2	13	13
Spain	19	--	2	1	--	3	(2)	25	25
Sweden	--	(2)	--	14	--	--	7	21	21
Switzerland	29	3	2	2	(2)	(2)	(2)	36	36
Taiwan	--	13	--	10	--	1	4	28	28
United Kingdom	35	366	9	57	(2)	9	9	485	485
Other	53	49	7	63	21	162	45	400	400
Total	472	1,460	67	358	35	645	251	3,280	3,280

^rRevised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

	Percent	
	Wrought	Cast
February 2006:		
Stainless and heat resisting steels	100	(1)
Alloy steels	71	29
Superalloys	90	10
Copper-nickel alloys	97	3
Other nickel-base alloys	100	(1)

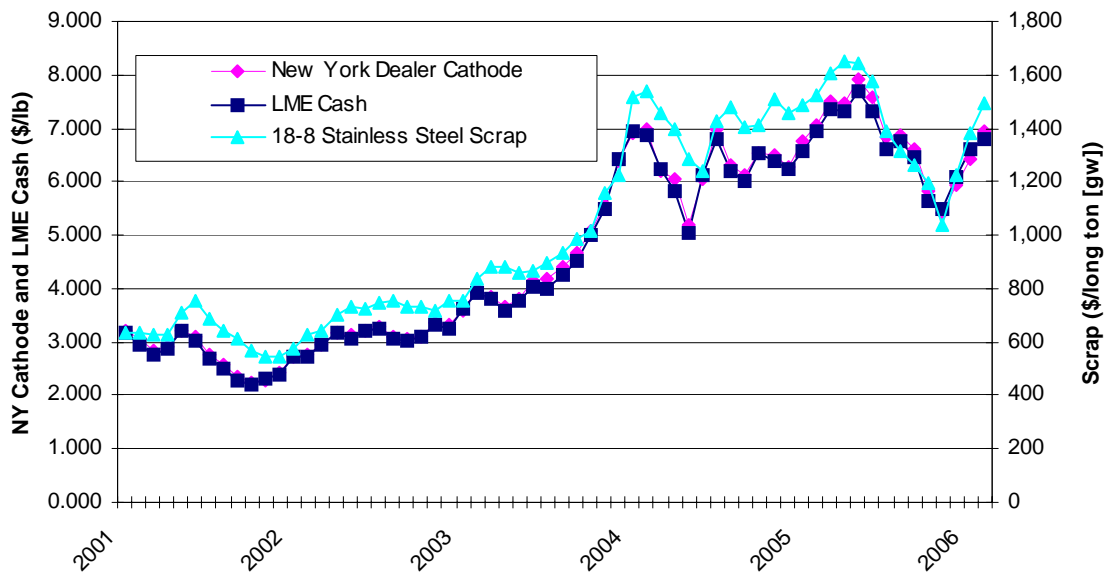
¹Less than ½ unit.

TABLE 9
NICKEL PRICES

Date	Platts Metals Week				American Metal Market
	Cathode NY Dealer \$/lb.	LME Cash mean ¹ \$/t	LME Cash mean ¹ \$/lb.	18/8 Stainless steel scrap Free market \$/long ton (gw)	18/8 Stainless steel scrap Pittsburgh \$/long ton (gw)
2005:					
Average for month of:					
February	7.065	15,344.625	6.960	1,520	1,513
March	7.510	16,184.524	7.341	1,609	1,563
April	7.480	16,136.429	7.319	1,647	1,685
May	7.920	16,919.750	7.675	1,645	1,629
June	7.564	16,154.432	7.328	1,578	1,610
July	6.820	14,570.833	6.609	1,390	1,538
August	6.863	14,886.932	6.753	1,315	1,388
September	6.610	14,223.088	6.451	1,260	1,388
October	5.840	12,396.548	5.623	1,194	1,350
November	5.429	12,111.477	5.494	1,038	1,244
December	5.923	13,425.625	6.090	1,225	1,193
Yearly average	6.814	14,737.960	6.685	1,409	1,469
2006:					
Average for week ending:					
February 3	6.922-7.171	15,098.000	6.848	1,450-1,500	1,300-1,325
February 10	6.977-7.158	15,080.500	6.840	1,450-1,500	1,400-1,425
February 17	6.918-7.177	14,985.000	6.797	1,475-1,550	1,400-1,425
February 24	6.957-7.053	14,835.000	6.729	1,500-1,550	1,400-1,425
March 3	6.963-7.032	14,911.500	6.764	1,490-1,525	1,400-1,425
March 10	6.848-7.134	14,765.500	6.698	1,475-1,525	1,500-1,525
March 17	6.898-6.964	14,740.000	6.686	1,475-1,500	1,500-1,525
March 24	6.955-7.089	14,894.500	6.756	1,475-1,500	1,500-1,525
March 31	7.080-7.093	15,135.500	6.865	1,500-1,525	1,500-1,525
April 7	7.228-7.856	16,183.500	7.341	1,500-1,525	1,500-1,525
April 14	7.855-8.355	17,526.250	7.950	1,575-1,600	1,525-1,550
April 21	8.435-8.637	18,608.750	8.441	1,675-1,725	1,525-1,550
April 28	9.219-9.492	19,463.000	8.828	1,800-1,850	1,525-1,550
Average for month of:					
January	6.408	14,549.643	6.600	1,379	1,275
February	6.944	14,975.000	6.793	1,497	1,387
March	6.949	14,893.043	6.755	1,499	1,493
April	8.184	17,931.806	8.134	1,656	1,531

¹Mean of the cash buyer price and the cash seller and settlement price.

2001-2006 AVERAGE MONTHLY PRICES (Derived from Metals Week and American Metal Market quotations)



2000-2005 STOCKS

